

AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application, in which claims 30 and 31 are newly added.

1. (Previously presented) A method for providing network management of a submarine cable network, the method comprising:

monitoring a plurality of physical connections between a first line terminating equipment and a second line terminating equipment;

selectively receiving alarm signals from at least one of the first line terminating equipment and the second line terminating equipment via a respective one of binary alarm interfaces coupling the first line terminating equipment and the second line terminating equipment, each of the binary alarm interfaces directly providing alarm and status condition information represented by the alarm signals without embedding the alarm and status condition information in traffic-bearing signals; and

reconfiguring the submarine cable network based upon the receiving step.

2. (Original) The method according to claim 1, wherein the reconfiguring step is performed to restore service according to a plurality of classes of services.

3. (Original) The method according to claim 1, wherein the reconfiguring step is performed to provision services on the submarine cable network.

4. (Canceled)

5. (Original) The method according to claim 1, wherein the steps of receiving the alarm signals and reconfiguring are performed by a network management module.

6. (Original) The method according to claim 5, wherein the network management module resides within at least one of the first line terminating equipment and the second line terminating equipment.

7. (Original) The method according to claim 5, wherein the network management module resides within a switching system.

8. (Previously presented) The method according to claim 1, wherein the reconfiguring step is performed to provide restoration of the submarine cable network, the reconfiguring step comprising:

detecting a fault on one of the plurality of physical connections based upon the received alarm signals;

retrieving restoration information; and

rerouting the traffic on the one physical connections to another one of the plurality of physical connections based upon the restoration information.

9. (Original) The method according to claim 1, further comprising:

receiving provisioning data that include capacity requirements of a customer; and

reconfiguring the submarine cable network based upon the capacity requirements.

10. (Previously presented) A communication system for providing network management of a submarine cable network, the system comprising:

- a line terminating equipment configured to monitor a plurality of physical connections of the submarine cable network;
- a binary alarm interface coupled to the line terminating equipment, the binary alarm interface directly providing alarm and status condition information without embedding the alarm and status condition information in a traffic-bearing signal; and
- a network management module configured to receive selectively an alarm signal from the line terminating equipment via the binary alarm interface and to reconfigure the submarine cable network based upon the received alarm signal.

11. (Original) The system according to claim 10, further comprising:

- a database configured to store restoration information, wherein the network management module reconfigures the submarine cable network to provide restoration services according to a plurality of classes of services and the stored restoration information.

12. (Original) The system according to claim 10, wherein the network management module reconfigures the submarine cable network to provision services on the submarine cable network.

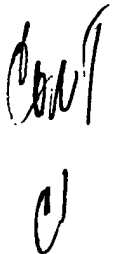
13. (Previously Presented) The system according to claim 10, further comprising:

- a switching system coupled to the binary interface and configured to forward and receive traffic from the submarine cable network, wherein the binary interface strips alarm signals from the line terminating equipment and forwards the alarm signals to the network management module.

14. (Original) The system according to claim 13, wherein the network management module resides within the switching system.

15. (Original) The system according to claim 13, wherein the network management module resides within the line terminating equipment.

16. (Original) The system according to claim 10, wherein the network management module is further configured to detect a fault on one of the plurality of physical connections based upon the received alarm signals to reroute the traffic on the one physical connections to another one of the plurality of physical connections.

 17. (Original) The system according to claim 10, wherein the network management module is further configured to receive provisioning data that include capacity requirements of a customer and to reconfigure the submarine cable network based upon the capacity requirements.

18. (Previously presented) A computer-readable medium carrying one or more sequences of one or more instructions for providing network management of a submarine cable network, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

monitoring a plurality of physical connections between a first line terminating equipment and a second line terminating equipment;

selectively receiving alarm signals from at least one of the first line terminating equipment and the second line terminating equipment via a respective one of binary alarm interfaces coupling the first line terminating equipment and the second line terminating equipment,

each of the binary alarm interfaces directly providing alarm and status condition information represented by the alarm signals without embedding the alarm and status condition information in traffic-bearing signals; and
reconfiguring the submarine cable network based upon the receiving.

19. (Original) The computer-readable medium according to claim 18, wherein the reconfiguring step is performed to restore service according to a plurality of classes of services.

20. (Original) The computer-readable medium according to claim 18, wherein the reconfiguring step is performed to provision services on the submarine cable network.

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21. (Canceled)

22. (Original) The computer-readable medium according to claim 18, wherein the steps of receiving the alarm signals and reconfiguring are performed by a network management module.

23. (Original) The computer-readable medium according to claim 22, wherein the network management module resides within at least one of the first line terminating equipment and the second line terminating equipment.

24. (Original) The computer-readable medium according to claim 22, wherein the network management module resides within a switching system.

25. (Original) The computer-readable medium according to claim 18, wherein the reconfiguring step is performed to provide restoration of the submarine cable network, the reconfiguring step comprising:

detecting a fault on one of the plurality of physical connections based upon the received alarm signals;
retrieving restoration information; and
rerouting the traffic on the one physical connections to another one of the plurality of physical connections based upon the restoration information.

26. (Original) The computer-readable medium according to claim 18, wherein the one or more processors further perform the step of:

receiving provisioning data that include capacity requirements of a customer; and
reconfiguring the submarine cable network based upon the capacity requirements.

27. (Previously presented) A communication system for providing network management of a submarine cable network, the system comprising:

means for monitoring a plurality of physical connections between a first line terminating equipment and a second line terminating equipment of the submarine cable network, the monitoring means including binary interfaces coupled the first line terminating equipment and the second line terminating equipment, each of the binary alarm interfaces directly providing alarm and status condition information without embedding the alarm and status condition information in traffic-bearing signals;
means for selectively receiving alarm signals from the binary alarm interfaces of the monitoring means; and

means for reconfiguring the submarine cable network based upon the received alarm signals.

28. (Original) The system according to claim 27, wherein the reconfiguring means restores service of the submarine cable network according to a plurality of classes of services.

29. (Original) The system according to claim 27, wherein the reconfiguring means provides provisioning of services on the submarine cable network.

30. (New) The method according to claim 8, wherein the restoration information is based on service level agreement (SLA) parameters.

31. (New) The method according to claim 30, wherein the SLA parameters are pre-determined and prioritized, and physical connections corresponding to higher priority SLA parameters are restored before physical connections corresponding to lower priority SLA parameters.
